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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/767,539	01/23/2001	Steven Adler-Golden	SPSC/001/US	2985

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EXAMINER

GUTIERREZ, ANTHONY

ART UNIT	PAPER NUMBER
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2857

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/767,539	Applicant(s) ADLER-GOLDEN ET AL.	
	Examiner Anthony Gutierrez	Art Unit 2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5,7, and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Holzer-Popp et al. (US Patent 6,484,099).

As to claim 1, Holzer-Popp discloses an improved method of correcting for atmospheric effects on a remote image of the Earth's surface taken from above, wherein the image comprises a number of images of the same scene each including a large number of pixels, each at a different wavelength band, and including infrared through visible wavelengths, comprising: providing a radiation transport model that relates spectral radiance to spectral reflectance via a set of parameters (col. 4, line 60- col. 5, line 34) ; providing a discrete number of trial aerosol visibility values for at least one of one or both of trial aerosol property values and aerosol types; using the radiation transport model to calculate the model parameter values for each of the trial aerosol visibility values (col. 6, lines 35-50); selecting image pixels having a one or more presumed, predefined ratios of reflectance's among two or more specific wavelength

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bands (col. 6, lines 5-18); using the radiation transport model parameters to determine the surface reflectance for the selected image pixels for each of the specific wavelength bands for each combination of trial visibility value and trial aerosol property value or values, or aerosol type (col. 6, lines 35-50); comparing the determined surface reflectance's to the predefined ratio of reflectances; and resolving from the comparison a corrected image visibility value for each trial aerosol property value or values or aerosol type (col. 6, line 60-col. 7, line 9).

As to claims 2 and 3, Holzer-Popp et al. further discloses using the radiation transport model to calculate the model parameter values includes performing calculations for a plurality of geometric conditions of solar illumination and sensor viewing, storing the calculation results, and interpolating the stored results to the specific geometric conditions that apply to the image being analyzed (col. 5, lines 35-58).

As to claim 4, Holzer-Popp et al. further discloses using the radiation transport model to calculate the model parameter values includes performing calculations of the radiance from the surface that is scattered into the sensor by weighting the spectra from different parts of the surface according to their contributions to each pixel (col. 6, line 60-col. 7, line 10).

As to claim 5, Holzer-Popp et al. further disclose that the radiation transport model includes MODTRAN (col. 6, line 66).

As to claim 7, Holzer-Popp et al. further implies that the viewing angles can be off-nadir (col. 5, lines 7-9) by disclosing that the sensor data has different geometric resolutions. Off-nadir angles are implied because if there were only one geometric

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resolution, it might be limited to nadir, but if there is more than one geometric resolution then one must be off-nadir.

As to claim 36, Holzer-Popp et al. further discloses that the number of sets of either trial aerosol property values or aerosol types is greater than one, the number of specific wavelength bands is greater than two, the number of predefined ratios of reflectances is greater than one, and in which by comparing the determined surface reflectances to the predefined ratios of reflectance's both the corrected image visibility value and the aerosol property value or values or aerosol type are resolved (col. 7, lines 20-35).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holzer-Popp et al. (US Patent 6,484,099) in view of Barnes (US Patent 6,422,508 B1).

As to claim 6, Holzer-Popp et al. discloses that the sensors can be satellite or airborne sensors (col. 1, lines 10 and 11) and further implies that that the angles can be off-nadir (col. 5, lines 7-9) by disclosing that sensor data has different geometric resolutions. Off-nadir angles are implied because if there were only one geometric

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resolution, it might be limited to nadir, but if there is more than one geometric resolution then one must be off-nadir.

Holzer-Popp et al. does not specifically disclose that the sensor viewing angle is nadir.

Barnes, however, discloses a method for hyperspectral imaging that incorporates specifically both overhead (or nadir) and off-nadir sensor angles (col. 1, lines 15-48, and col. 3, lines 39-44). Barnes teaches that conventional methods are limited to nadir or "straight down" viewing (col. 4, line 61-col. 5, line 4), but the method of invention benefits by extending the angle to include off-nadir angles to increase the cross-sectional area of the sample set (col. 2, lines 46-50).

It therefore would have been obvious to one of ordinary skill in the art at the time of invention to apply the method of Holzer-Popp not only to off-nadir scanning, but also specifically to nadir scanning, since it would increase the cross-sectional area under survey in a combined overhead/off-nadir scan as opposed to off-nadir scanning alone, and since it would allow for other benefits (independent of increased scan angle benefits) that are obtained by other aspects of the method of Holzer-Popp, when applied in a conventional fixed nadir scanning system, the conventional scanning system being readily available and familiar to one skilled in the art, thereby increasing the applicability of the method of Holzer-Popp.

Response to Arguments

5. The Declaration filed on 2/4/04 under 37 CFR 1.131, has been reconsidered but is still deemed to be ineffective to overcome the Holzer-Popp et al. reference (US Patent 6,484,099 B1).

The Applicant has submitted the paper "Status of Atmospheric Correction Using a MODTRAN4-Based Algorithm" with a Declaration Under 37 CFR 1.131 as evidence for conception and reduction to practice of the limitations of the method of invention in claim 1, in order to overcome the prior art rejection.

MPEP Section 2137 says the following:

Where there is a published article identifying the authorship (MPEP § 715.01(c)) or a patent identifying the inventorship (MPEP § 715.01(a)) that discloses subject matter being claimed in an application undergoing examination, the designation of authorship or inventorship does not raise a presumption of inventorship with respect to the subject matter disclosed in the article or with respect to the subject matter disclosed but not claimed in the patent so as to justify a rejection under 35 U.S.C. 102(f). However, it is incumbent upon the inventors named in the application, in reply to an inquiry regarding the appropriate inventorship under subsection (f), or to rebut a rejection under 35 U.S.C. 102(a) or (e), to provide a satisfactory showing by way of affidavit under 37 CFR 1.132 that the inventorship of the application is correct in that the reference discloses subject matter invented by the applicant rather than derived from the author or patentee notwithstanding the authorship of the article or the inventorship of the patent. In re Katz, 687 F.2d 450, 455, 215 USPQ 14, 18 (CCPA 1982) (inquiry is

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appropriate to clarify any ambiguity created by an article regarding inventorship, and it is then incumbent upon the applicant to provide "a satisfactory showing that would lead to a reasonable conclusion that [applicant] is the...inventor" of the subject matter disclosed in the article and claimed in the application).

With respect to those individuals listed as inventors with the present application that were not listed as authors of the subject matter relied upon, the Examiner is persuaded by the Applicant's arguments that there is no support in the record that shows that these individuals did not contribute to the claimed invention and has therefore withdrawn the rejection under 35 U.S.C. 102 (f).

The Declaration, however, is still deemed to be ineffective for the following reasons:

Both MPEP section 2137 (as addressed above) and the Applicant's own admission in the Remarks of 10/6/04 ("An equally plausible explanation would be that the listed authors who are not inventors either contributed to the written document and not the invention, or contributed only to description of subject matter other than the invention") show that the designation of authorship does not raise a presumption of inventorship. Therefore, the submitted paper cannot serve as evidence of inventorship with respect to the authors, and therefore it fails to show that the invention of the present application was conceived and reduced to practice by any specific inventor, including the authors of the paper and the inventors of the present application.


Furthermore, the paper lists fourteen different authors. Nine authors of the paper are not listed as inventors in the present application. Therefore, even if a designation of authorship could serve as an assumption of inventorship, it would be incumbent upon the Applicant to provide a satisfactory showing that the other listed authors were not in fact inventors. The Applicant has not done so. See MPEP 715.07.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Gutierrez whose telephone number is (571) 272-2215. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on (571) 272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Anthony Gutierrez
10/26/04


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